

Abstract

A light collecting and focusing device for an ultrasonic digitizer has a conical tip and an infrared transparent polycarbonate light pipe. Infrared signals received by the conical tip are optically coupled to the photodiode through the light pipe. This device allows the use of a single photo diode mounted on the digitizer for receiving infrared signals from emitters that are not in the direct line of sight with the photodiode. Furthermore, optical coupling between the source of the infrared signals and the photodiode is maintained regardless of the orientation of the digitizer about its access.